THE INVASION

DOCTOR WHO

AN ADVENTURE IN SPACE & TIME

CODE : VV.

Derrick Sherwin

London 1979

After dodging a missile fired from a rocket on the dark side of Earth's moon and landing in 20th Century England, I decided that the Tardis needed an overhaul. I intended to enlist the help of my old friend Professor Travers, but four years had passed since the second Yeti affair, and he was now in America with his daughter Anne. In his absence, a man named Professor Watkins and his niece Isobel were staying at his house. However, Isobel told Jamie, Zoe and me that Watkins had disappeared after going to work for a company called International Electromatics (which seemed to have a world-wide monopoly of electronic equipment).

We later discovered that the head of I.E., Tobias Vaughn, had allied himself with the Cybermen, who were planning an invasion! Cybermen were already present in force in London's sewers, but luckily I.E.'s activities had aroused the suspition of U.N.I.T. (United Nations Intelligence Taskforce), an international organisation headed in Britain by my friend Lethbridge-Stewart, now a Brigadier.

Examining various pieces of I.E. equipment, I discovered that they all contained micro-monolithic circuits which had nothing to do with the equipment itself, but which obviously had some other purpose. After speaking to Watkins, rescued from I.E. by U.N.I.T., I realised that they were emotional circuits which would be activated from the rocket we had seen earlier to produce the Cyber-hypnotic force, thus bringing the whole population of Earth under Cyberman control!

The Invasion began, but my friends and I were able to avoid being hypnotised by wearing neuristors on our necks as polarisors. U.N.I.T. managed to eliminate most of the Cyberfleet with missiles (after Zoe calculated the optimum trajectories), but unfortunately the Cybermen decided to destroy all life on Earth with a Cyber-Megatron bomb!

Vaughn, his plans for world domination in ruins, now hated the Cybermen and agreed to help me defeat them. He had anticipated that they would kill him after the invasion, and so he had forced Watkins to create an emotion-inducing machine called the Cerebration Mentor to act as a weapon against them. Using this machine to afford us some protection, Vaughn led me to the location of the transmitter which would guide the Cybermen's bomb to Earth, so that the Brigadier and his men could destroy it. Regrettably, Vaughn was killed by the Cybermen in the process.

When the main Cyber-ship came closer to Earth to deliver its bomb by other means, U.N.I.T. were able to destroy it with a Russian rocket. The bomb itself was safely disposed of in space by missiles, and it was then left to the troops to polish off the remainder of the invasion force on Earth.

It had been a very close [illegible] but Earth was safe once more and Jamie, Zoe and I left in the Tardis.

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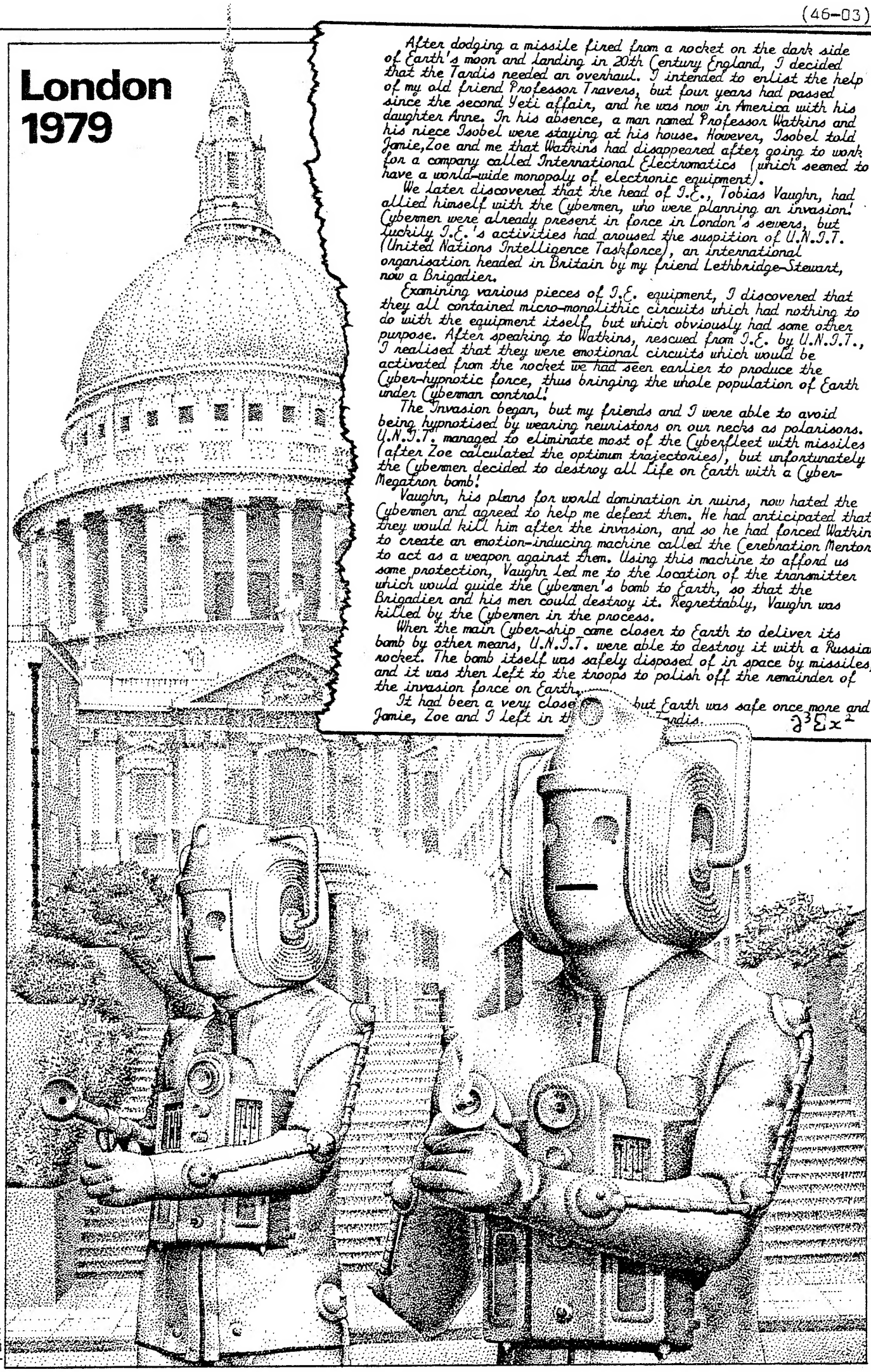

TONY

DRAMA EXTRACT

Watkins struggled painfully to his feet, only dimly aware that he was being helped and supported by Gregory. The muscles in his chest felt as though they had been gripped by red-hot talons, so powerful had been the emission from the Cerebratron Mentor. Swallowing deep gulps of fresh air he strove to calm himself, letting the red mist clear slowly from his vision. Vaughn's face swam into view, cruel and implacable. The Professor held his breath for a moment, determined not to let the man hear the electronically-induced panic in his voice when he spoke.

"Vaughn. Obviously I can't choose but to work for you. If I refuse, you'll torture me. You'll kill me. You know I can't stand up to torture. I don't want to die. But you're an evil man, Vaughn. You're sadistic; you're a megalomaniac. You're insane..."

Vaughn's face broke into a smile, as if Watkins had just paid him a series of compliments. Feeling a surge of anger, Watkins pulled himself free of Gregory's grasp and pointed an accusing finger at his tormentor. "I pity you, but if I get half the chance, I'll kill you."

"Kill me?" queried Vaughn, amused. "Would you? Give me your gun, Packer."

Obediently Packer handed over his sidearm. Vaughn weighed it in his hand for a moment, assuring himself that there were bullets in the magazine. Then, grasping the barrel, he offered it to Watkins. "Take it."

The Professor stared back stupidly, unable to comprehend Vaughn's motives. When he made no move to accept, Vaughn laughed and pressed the weapon into his hand. "There you are, take it. Now you're free to shoot me, Professor."

The small crowd of onlookers backed away as Watkins hefted the gun uneasily. Only Vaughn stood motionless, just a few feet away. He presented an easy target at such close range, yet Watkins felt fear returning to his heart, real fear this time. Despite the presence of the loaded gun in his hand, he could not bring himself to do the deed he had avowed so intently just seconds before.

Vaughn gave him a nod of encouragement. "Shoot," he said, pulling open his jacket. Watkins stood petrified. Losing patience, Vaughn stepped forward and slapped the Professor hard across one cheek. "Shoot. Come on, the gun's loaded, or haven't you got the courage to pull the trigger?"

A sharp pain seared across Watkins' face, bringing hot tears to his eyes. With a howl of anguish he closed his eyes and fired. Once. Twice. Three times the gun barked before courage finally deserted him and the pistol fell limply to his side. He opened his eyes, expecting to see Vaughn's fallen body and a squad of Packer's men ready to gun him down in return. Instead he saw neither. Vaughn was still upright and very much alive. For a second he assumed that the pistol had fired only blanks, or that he had somehow shot wide. Then his eyes widened in abject horror as he saw that Vaughn's shirt was punctured by three smoking holes, the surrounding fabric charred from the searing heat of the bullets' entry into his body. It was impossible, yet the evidence was there before his eyes. As blood drained from his head and he fainted dead away, a final thought crossed his mind. Had Vaughn made some pact with the Devil, or was he truly the Devil himself?

Vaughn laughed, gesturing Packer towards the Professor's slumped body. "Take him away and get work started on the machine immediately."

STORY REVIEW

Trevor Wayne

What does a script editor to if a number of stories fall through at the last minute? The answer seems to be: call in the Cybermen. With the season in danger of collapsing around his ears, Derrick Sherwin handed over his blue pencil to Terrance Dicks and hastily penned eight episodes himself from a storyline provided by Kit Pedler. The result, realised on screen by Douglas Camfield, was splendid stuff and in many respects the high point of the sixth season.

'The Invasion' is a totally successful blend of good characterisation (with suitably convincing performances from Nicholas Courtney as Lethbridge-Stewart and Kevin Stoney as the evil Tobias Vaughn) and taut plotting. Despite the prodigious length of the serial, there are no dull patches and little let-up in the pace and excitement; for once the defeat of the invasion and the downfall of the aliens are not reserved for the last ten minutes of the final episode. Excellent use of film and locations and the proliferation of soldiers, guns, missiles, helicopters and other military hardware once again prove that Douglas Camfield's forte was the strong action-packed adventure.

Were it not for the presence of the Doctor and his companions and their old foes the Cybermen, this story would seem to owe more to the influence of Ian Fleming than to Kit Pedler. Tobias Vaughn, with his dream of world domination and his army of black-clad thugs, might easily be one of the master criminals of SPECTRE, whilst Lethbridge-Stewart is a cross between 'M' and James Bond himself and the snappy acronym UNIT is not too far removed from UNCLE (Ian Fleming provided the original inspiration and coined the names of some of the principal characters for 'The Man From UNCLE'). Strip away the veneer of science fiction from this story and you have a direct struggle between Vaughn, cunning and treacherous, and the Brigadier, energetic and tenacious. Although Vaughn has a veritable army of thugs at his disposal, Lethbridge-Stewart has a <u>real</u> army at his (extras in the final struggle between UNIT and the Cybermen were genuine Guardsmen) and even when it transpires that Vaughn has the terrible Cybermen as his allies, UNIT can call on the services of the shabby little man who has become the creatures' most dedicated and successful foe.

Sally Faulkner's Isobel is an instantly recognisable 1960s cliche - the TV series' swinging dolly-bird (remember Polly?). Her trendy speech and attitudes (she writes notes on the wall rather than on notepaper because you can't lose a wall) soon become very tiring; cliche and caricature are no substitute for real characterisation, and in this respect she and her uncle, the barely-glimpsed Professor Watkins, are the serial's only real disappointments. Given that Watkins builds the Cerebratron Mentor machine which is used against the Cybermen he does at least have a contribution to make to the development of the story, but his niece serves only as decoration.

Zoe is also on hand to brighten the screen for the male viewer, but she in addition has the technical ability to contribute towards the furtherance of the plot. In this story we are not only treated to the spectacles of her giving a computer a nervous breakdown by inputting insolvable equations and providing the firing pattern that enables UNIT's interceptor rockets to wipe out the Cybermen's space fleet (it is little wonder that at one stage the Doctor feels somewhat redundant), but there is also a positive recognition of Wendy Padbury's undeniable sex appeal. At the beginning of episode one all three travellers are thrown to the floor of the TARDIS by

the bumpy landing; but did Jamie have to smack Zoe's bottom quite so hard and then leave his hand there while he pushed himself up? And did the Doctor have to make quite such a pantomine of not touching the same part of the girl's anatomy when trying to help her scramble into the cab of a truck? Further treats are in store when, after Zoe has changed into the briefest of mini-skirts to model for Isobel's photography (presumably Jamie didn't have the legs for it), the story calls for the ascending of a rope ladder into a helicopter and the descending of a ladder into a sewer. (We are spared the sight of whatever lay beneath Jamie's kilt by Frazer Hines' insistence on having lead shot sewn into the hem of the garment.)

If Zoe's appearance and activities in this story are especially memorable, the same cannot be said for Jamie. Although it is he, in preference to the computer expert Zoe, whom the Doctor takes with him when he makes his initial visit to International Electromatics, he in fact has little to do for eight episodes other than to act as someone for the other characters to talk to. It is Isobel and Zoe who decide to go off and try to photograph the Cybermen; Jamie goes along just to look after them, although he eventually has to be rescued from the sewer along with the girls by Benton, who has already acquired the necessary photographs.

The Doctor himself, as has already been noted, seems superfluous at times; indeed, on this occasion he is almost the victim of his own unprepossessing nature as his baggy-trousered figure is in danger of being lost among the smart uniforms and explosions. Two things that the Doctor did in this serial jarred at the time and remain in my memory. The first was the simple fact of him driving a Land Rover - it somehow seemed wrong to see him doing something so ordinary, so obviously Earthly. The second was rather more serious. Having watched UNIT's battle against the Cybermen in the final episode, with rifles having no effect on the aliens (although I would suggest that Mr. Sherwin seriously underestimated the power of the Self Loading Rifle) and the soldiers resorting to mortars and "bazookas" to despatch their foes, I felt that the scene of the Doctor running from the ray gun blasts that had been fatal when earlier aimed at a soldier, jumping and clutching the seat of his baggy trousers, was an unforgivable introduction of farce into what was otherwise a serious and very exciting story.

The final weapon thrown against the Cybermen by mankind in 'The Invasion' is a nuclear warhead atop a Soviet rocket that was originally to have been used for a manned flight. To put this in its historical context, the Russians and Americans had at the time of transmission only just ventured back into space following tragedies the year before. In October 1968 Apollo 7, the first manned mission in the series, flew into Earth orbit with a crew of three, whilst a short while later a cosmonaut aboard Soyuz 3 docked with the unmanned Soyuz 2. As the lethal Russian rocket sped towards the doomed Cyber-ship in 'Doctor Who', a huge Saturn 3 rocket launched Apollo 8 from Cape Kennedy on its flight around the moon.

Excellent though this story is, it does pose one continuity problem; the Cybermen first appeared on Earth in 1986 in 'The Tenth Planet' (Serial "DD") and no-one had heard of them before, not even in Geneva, where no-one seemed to know about UNIT either, come to that. So what are the Cybermen doing turning up before this - and clearly a more advanced type of Cyberman at that? The real answer, of course, is that, with all the production problems of the sixth season, they were the only 'big' adversary of the Doctor's available to make an invasion at such short notice. And, after all, as the Doctor often says: "Time is relative..."

SPACE & TIME

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SPACE & TIME

Tobias Vaughn - A Benevolent Dictator?

Character Profile by Pam Baddeley

Urbane, charming - if somewhat condescending - a man of means and business acumen; that is the mask presented by Tobias Vaughn, managing director of International Electromatics, to those 'privileged' enough to bypass the electronic receptionist in the lobby of his imposing office. Yet the mask conceals a darker side; a man who is ruthless, sadistic and sufficiently egotistical to believe he can manipulate and deceive anyone...even the Cybermen.

On first being admitted to Vaughn's spacious private office, the Doctor and Jamie encounter only a condescending smoothness from him. Yet the Doctor notices a vital and sinister clue to the thing which Vaughn has become; humans normally blink once every ten to fifteen seconds, but the director blinks far less frequently. It is the kidnapped Professor Watkins, however, who is to make the full, horrifying discovery when challenged by Vaughn to shoot him - the bullets leave smoking holes in the laughing director's chest. Vaughn resists full conversion, however; as he tells his allies: "My body may be cybernetic but my mind stays human!" Dictating terms to the Cybermen much as he might to his own heads of department, he insists on full control over the Cyber army already on Earth. "Let's understand one another. You will not get what you want unless I, too, achieve my objects." But he realises that the Cybermen will try to wrest control from him once their invasion is complete; hence his reliance on Professor Watkins' machine, the Cerebratron Mentor.

Vaughn admires intelligence even in an enemy, showing only amusement at Zoe's logically-achieved destruction of his computer receptionist. Yet, despite Jamie's conviction that "I don't think we could annoy that man even if we wanted to", Vaughn's mask of oily charm does slip occasionally. Faced with Packer's repeated incompetence in allowing the Doctor and Jamie to escape, he is at first only sarcastic - "Our clever Doctor has outwitted you - but then, that wouldn't be too difficult, would it?" - but his tolerence finally cracks under the weight of constant bungling by his subordinate. Nevertheless, angry shouts are all he metes out to Packer, very different to his callous treatment of the unfortunate scientist Gregory who allows Watkins to escape in the face of armed UNIT personnel and is subsequently thrown to the Cybermen for target practice. As the Professor perceptively remarks, "You're an evil man, Vaughn. You're sadistic; you're a megalomaniac. You're insane."

Far from being ashamed, Vaughn is proud of his collaboration with the invaders, boasting to the Doctor that it was he who contacted them and who masterminded the entire scheme - five years of work. The Cybermen have merely provided their advanced scientific skills and the 'muscle'. Vaughn refuses to accept the Doctor's warning that the human race will be destroyed, but his smugness nevertheless disappears momentarily: "Don't you understand yet? I've no alternative. I can't see all the years of work destroyed. I must go on, I must!" Inflexible, Vaughn cannot bend and so must break when his allies announce their intention to destroy all life on Earth with a bomb. "You can't do that. You can't destroy the world. What about me!" With a cry of defiance, he destroys the Cyber-Director before crumbling into dazed defeat. The Doctor's desperate attempts to get through to him - "Think of the millions of people on Earth who are about to die" - finally succeed; but not because of any appeal to his better nature. "If I help you, it'll be because I hate them." Bitterly, he tells the Doctor: "You think I'm mad, that all I want is power for its own sake. No...the world is weak, vulnerable, a mess of unco-ordinated and impossible ideals. It needs a strong hand - a single mind - a leader...I'll help you to destroy them because...they destroyed...my dreams." His hopes dead, thanks to his admiration for creatures as single-minded as himself, Vaughn has only hate to sustain him and is finally shot down by his erstwhile allies while helping the Doctor to reach the radio transmitter still guiding the Cybership toward Earth. The would-be dictator dies, his dreams in ruins about him, leaving only a memory of one of the most three-dimensional of 'Doctor Who' villains.

RADIO TIMES

The day a Cyberman went shopping in St. Pancras . . .

1 SAT 5.15

WHEN Dr. Kit Pedler took one of *Dr. Who's* Cybermen out into a busy shopping area of London's St. Pancras not so long ago, he almost blocked the street, and, as he puts it, 'got into trouble with the police.' Recalling the occasion, he doesn't sound very penitent.

'I wanted to know how people would react to something quite unusual,' he says, 'but I also wanted to be a nuisance.' This motive alone, he agrees, is on a schoolboy level. But underneath it is a cry against dull and stifling conformity.

Dr. Pedler puts it like this: 'I see the modern city as a great technical mechanism. To get people to serve in it we give them the illusion of freedom. But the things being done to them to get them to work are quite horrific. In multi-storied beehives their entire lives are ordered by systems analysts. It's loathsome and degrading to the individual to be considered in these terms.'

These are the positive thoughts behind Dr. Pedler's writing, now his biggest spare-time occupation. Even in the 'genial hokum' of *Dr. Who* he sees stronger links than he supposed existed between the Cybermen—'strong and immortal but the antithesis of everything that I conceive to be human'—and his more serious thought.

Now he is at work on more serious projects, including a half-finished book which looks back on history from the standpoint of 2016.

A relaxed and casually dressed family man of forty-one—he has four children aged four years to eighteen—Dr. Pedler spends his working hours in charge of the small anatomy department at the Institute of Ophthalmology, not far from the scene of his Cyberman's public appearance.

He is a fourth generation medical man who came into pure research after taking a second doctorate in experimental pathology. Seven years ago he started the department which he now runs, where his current interest is the working of the retina.

Medical research and science fiction are not, though, Dr. Pedler's only interests. He's a painter and sculptor who was influenced by his artist mother—'I wish I could paint as well as she did'—and he loves to play around with racing cars, especially old ones.

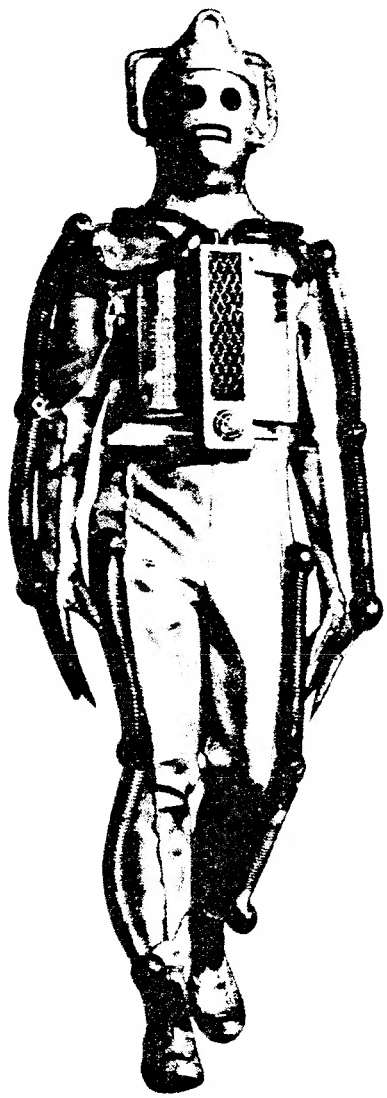
Dr. Pedler's scripts for *Dr. Who* grew out of a meeting with a BBC production team which came to his lab. to do a *Horizon* programme.

'I sent in some story lines, then some scripts. But the Cybermen didn't appear in the very first—that was about a mad computer in the Post Office tower over there'—he nods towards his office window.

How did he think of the Cybermen? 'I was talking to my wife—she's a doctor, too—in the garden. We were discussing spare parts surgery and conceived the idea of someone with so many mechanical replacements that he didn't know whether he was a human or a machine.'

FRED JONES

Dr. Kit Pedler and—below—his creation, the Cyberman



Issue dated 21st to 27th November 1968

KIT PEDLER

David Auger

In 1981, Terry Jones opened an edition of the BBC's book review programme 'Paperbacks' by saying that he had never before realised how close one could feel to someone when reading a book they had written until he heard about the death of the author of 'The Quest for Gaia'. Dr. Kit Pedler had died at his home near Sittingbourne, Kent on May 27th. He was fifty-three.

Christopher Magnus Howard Pedler trained in medicine and qualified as a pathologist, working in several London hospitals, before gaining a second doctorate for his work on the causes of retinal disease. As a result of his researches he published nearly forty papers concerning the eye and vision. He became a senior Reader at the University of London, where he created and headed the electron-microscopy unit of the Institute of Opthalmology. There, his interest in how the brain processes information received from the eyes led to a computer simulation of brain cells. Because of his scientific research, he was invited to become involved in broadcasting, notably with the documentary 'The Eye' for the BBC's 'Horizon' series, and it was this that led to his association with 'Doctor Who'. Gerry Davis, story editor, remembers:

"I was trying to get someone who might provide ideas and vet programmes, hardening up the science. Then somebody recommended Kit Pedler. I invited him round and tried him out. I was sitting in the office, from which you can see the Post Office Tower, which had just been built. I used to bounce this off people: 'What would happen if the Post Office Tower took over?' From most people nothing really came back, nothing original. But Kit Pedler was a real science fiction fan and he gave me a few ideas which were more science fiction than 'Doctor Who'. We then suggested ideas to each other and built on them, and before we knew it we were into a really good creative session. I think that during that first session we pretty well mapped out the storyline that became 'The War Machines'."

It was the beginning of a creative partnership that was to endure for several years, and was to produce the Cybermen for 'Doctor Who'. In 1979, in an introduction to a collection of 'Dan Dare' picture strips from 'The Eagle' comic, Pedler reflected on the genesis of these creatures:

"At the time I was obsessed as a scientist with the differences and similarities between the human brain and advanced computing machines, and I was thinking that although I could easily imagine a logical machine reasoning to itself and manipulating events outside it, by no stretch of the imagination could I visualise a machine producing a poem by Dylan Thomas. And so the Cybermen appeared."

Kit Pedler was not without a sense of humour; for many years after his last work on 'Doctor Who', providing the storyline for 'The Invasion', he kept a Cyberman costume on display in his office at the University, intimidating anyone who entered.

The next project to be initiated by Pedler and Davis was born of Pedler's own disillusionment with the scientific establishment of which he was a part. The BBC's 'Doomwatch' series aired Pedler's fears about the seemingly reckless abandon which accompanies technological advances, resulting in pollution of the environment and threatening the future of mankind. In a 1969 radio discussion, Pedler outlined the series' premise:

"It's about the first three scientific ombudsmen put out by a government to look into possible harmful effects of scientific research, and in it we find that our three characters keep coming up against all the various vested interests politically in the government, vested interests in science itself, and we tried to write stories around this general theme."

Pedler also affirmed his views about the duty of his fellow scientists involved with these new developments:

"I think the scientist is a citizen, and as such he has a complete responsibility as a citizen for the work he does. I don't think he can ever say 'Of course, it's up to a politician', or it's up to the people or something. He is the people, he is concerned with politics."

However, Pedler acknowledged the problems facing the individual who voices objections:

"I think the technologically profuse society we're growing up in is becoming so oppressive in its side effects that the individual's emotions have very little say. If a group of people want to protest about something then they're often forced into extreme measures, so that if they make a democratic, quiet protest about their misgivings about a particular subject, then I think no notice will be taken of it."

'Doomwatch' began its first season in 1970, bringing subjects such as the dumping of nerve gas at sea, test tube genesis and the effects of the misuse of science prominently to the public's attention for the first time. Pedler became known as "Dr Doom", but when the second season began transmission later that year, he was still firm in his convictions:

"I'm just as concerned as I ever have been. But I'm putting my concern to a more practical use now. I'm giving a series of lectures on 'Doomwatch' themes; and I meet with a group of scientists who are just as concerned about the dangers of technology."

A final season of 'Doomwatch' was transmitted in 1972, followed by a feature film, but by this time Pedler's and Davis's connections with the series had been severed. However, they continued to express their view through a series of novels based on 'Doomwatch'-like themes. Indeed, the first of these - 'Mutant 59: the Plastic Eater' - was an adaptation of the premise used in the television series' opening episode. 'Brainrack', the following novel, dealt with the effects of lead in petrol on the brain, and their last book together, 'The Dynostar Menace', told of what could happen when an experimental reactor aboard a Skylab-like space station is sabotaged, and the terrible consequences of the Earth being charred by ultra-violet radiation.

As with a lot of their writing, Pedler was concerned primarily with the scientific research and providing the concept for these novels, while Davis concentrated on interpreting this into a dramatic narrative. But Pedler did produce fiction on his own, including two radio plays – 'Trial by Logic' and 'Sunday Lunch' – as well as several short stories. One gripping ghost story of his concerned the experiences of an astronaut who is 'haunted' by his on-board computer, which seems to manifest the personality of a recently deceased colleague. Did the man tamper with the computer before his death, or is his ghost possessing the capsule? The reader is chilled by either prospect.

In the meantime, Pedler was still continuing his researches at the London University as well as giving broadcasts about cybernetics and ecology.

Pedler spent three years researching his final major project, travelling to the United States to interview scientists and witness their experiments, for the Thames television series 'Mind over Matter' – subtitled 'A Scientist's View of the Paranormal'. When he concluded his investigations, he summed his views up thus:

"A scientist would have to be either massively ignorant or a confirmed bigot to deny the evidence that the human mind can make connection with space, time and matter in ways which have nothing to do with the ordinary senses. Further, he cannot deny that these connections are compatible with current thinking in Physics, and may in the future become accepted as a part of an extended science, in which the description 'paranormal' no longer applies and can be replaced by 'normal'."

Pedler died during the preparation of the final programme of the series. He was due to make another documentary series for Thames, entitled 'Living without Oil', and was due to travel to the United States to act as scientific adviser on the filming of 'The Dynostar Menace' novel. He was also in the process of writing a sequel to the work that can be seen as his legacy – 'The Quest for Gaia'.

Gaia was the name given by the Greeks to one of the goddesses of the Earth, and Pedler used this name to describe the eco-system of the planet, which in his view could be likened to a living organism with the awareness and ability to repair any damage inflicted upon it; a process that could sometimes take millions of years, but which happened none the less. He believed that our current industrial society is so incompatible with the life process of the planet that unless we learn to live in symbiosis with it, we will upset the balance to such an extent that we will be destroyed. But the planet will survive.

Pedler saw the excessive waste produced by our society as the main culprit for this imbalance; every system, even in nature, creates entropy, but whereas in the natural order of things waste decays and is eventually ploughed back into the eco-system, the man-made processes seldom conform to this principle. Pedler illustrated this by the example of a power station which uses only twenty-eight per cent of the energy in its fuel to create electricity; the remaining seventy-two per cent being released into the atmosphere as waste heat – pollution. Another example of this principle is the needless packaging of certain consumer goods. Energy is expended in the creation of something which will be discarded once the goods are purchased, then more energy is required to transport the packaging to a centre to be destroyed. As a form of protest, Pedler was not averse to entering a shop to buy a shirt and stripping the garment of its redundant packaging, depositing the card and pins on the counter, before slinging the new shirt over his shoulder and strolling off.

Pedler attempted to live a simple life, rejecting many of the values and products of the industrial society in order to reduce his own personal 'entropy debt', working out practical alternatives which he put into use himself. These changes he chronicled in his book:

"There is no point in proposing changes unless they lead to an improvement in human creativity and happiness; and it is my strong belief that if we can re-learn a way of life which is, as far as possible, removed from the industrial process, then we can not only live within the limits set by the Earth, but also reawaken an expanded sense of vision and consciousness which our ancestors once had as a natural birthright. A vision which we have almost entirely suppressed by accepting the glittering products of industrialism."

Gerry Davis appeared on that 1981 edition of 'Paperbacks', discussing Pedler's work as well as paying tribute to his friend and collaborator:

"There have been many prophets of doom...what Kit was, essentially, was a very human person and, I think, a poet."

TECHNICAL OBSERVATIONS

'The Invasion' was based on a Kit Pedler storyline entitled 'Return of the Cybermen', in which the Cybermen invaded Earth with the aid of a giant computer corporation. Derrick Sherwin took this idea and expanded on it greatly, adding many elements from the previous season's successful 'The Web of Fear' (Serial "QQ"). The Director of that story, Douglas Camfield, was recalled for 'The Invasion', and he in turn injected many ideas and cast names of his own.

Unfortunately, not everything which Sherwin and Douglas Camfield planned for the story proved possible in practice. Sherwin initially included the characters of Professor Travers and his daughter Anne in the script, but it transpired that both Jack Watling and Tina Packer, who had played the roles in 'The Web of Fear', were unavailable at the time of shooting. A certain amount of re-writing was therefore necessary to substitute the characters of Professor Watkins and his niece, Isobel, for Travers and Anne. Camfield, on the other hand, was successful in recalling Nicholas Courtney to play Lethbridge-Stewart, and also created the small role of Benton for an up-and-coming actor named John Levene, who had played one of the Yeti in 'The Web of Fear'. Camfield is also believed to be responsible for naming the scientific/military body featured in the story as UNIT (United Nations Intelligence Taskforce).

'The Invasion' had originally been planned as a six-part story but, due to a number of other scripts falling through, it was eventually allotted an extra two episodes. This meant that Producer Peter Bryant was able to give Sherwin and Camfield the biggest budget ever afforded a 'Doctor Who' story. An announcement in the 'Radio Times' proudly boasted of the great amount of location work it featured - a facility made possible mainly by virtue of the fact that these were the first episodes of a new recording block, thus giving the Director a far greater opportunity for pre-filming than would have existed mid-season (a situation from which 'The Abominable Snowmen' (Serial "NN") had earlier benefitted.

With the BBC's Visual Effects Department unable to provide cover for all eight episodes, Peter Bryant decided to contract the story's entire special effects requirements out to the external 'Trading Post' company, who assigned designer Bill King to the project. Essentially a Props firm, 'Trading Post's' forte lay in custom engineering rather than in model building and shooting, but they nevertheless designed, constructed and filmed all model sequences for 'The Invasion'; the TARDIS under missile attack on the dark side of the Moon, the Cyber-fleet and, ultimately, the destruction of the model spaceships (this latter effect being achieved by the rather primitive technique of catapulting burning gunpowder charges at the models).

Incidental music for the story came from no less than three sources. Initially Douglas Camfield hired the Don Harper ensemble to come up with some John Barry-style music for what was to be a very 'James Bond'-like production. Harper's fees, however, proved prohibitive and in the end only four minutes' worth of music was bought from him, although the several themes he composed were used many times over throughout the eight episodes. Brian Hodgson provided all musical 'stings' for the story, while his Radiophonic Workshop colleague John Baker supplied a band of muzak for scenes in Vaughn's offices, originally composed for the 'Out of the Unknown' episode entitled 'Time in Advance'.

The opening of the story directly reflects Sherwin's idea that the main events of the preceding adventure, 'The Mind Robber', never really happened (see page "45-10"). The TARDIS is first shown re-assembling, then an electronic fuzz over a defocussed picture gradually gives way to a clear shot of the Doctor, Zoe and Jamie in exactly the same positions as at the end of 'The Mind Robber' episode one.

The filming for this story took place at a number of different locations. Vaughn's office exteriors, the I.E. factory and the railway sidings were all found at the 'Guinness' factory in Acton (later to be demolished). Regent's Canal gave Frazer Hines and Patrick Troughton an opportunity for canoeing in episodes four and five, while the embankment roads at Blackfriars provided suitable manhole entrances to the sewers. The field in the I.E. complex was outside Ruislip, Middlesex, while the R.A.F. authorities at Northolt supplied jeeps, runways and a Hercules Transporter plane for the scenes at UNIT's aircraft H.Q. By far the most difficult location shooting, however, took place early one Sunday morning on the southern approaches to St. Paul's Cathedral in the heart of London. Here the all-important invasion scenes were shot, but so problematical did crowd control and administrative arrangements prove that no-where near as many scenes were filmed as Douglas Camfield had originally planned.

All studio recordings for 'The Invasion' were done at Studio D, Lime Grove. With the aid of a slight modification to the script, Designer Richard Hunt was able to get away with using the same set both for Vaughn's London office and for that at the factory; only the backdrop beyond the window changed.

It was Douglas Camfield who chose Kevin Stoney to play Vaughn, remembering his earlier portrayal of Mavic Chen in 'The Daleks' Master Plan' (Serial "V"). To enhance Vaughn's sinister appearance, Make-Up Designer Sylvia James gave him one eyebrow permanently arched.

UNIT's mushroom/fawn uniform was the creation of Costume Designer Bobi Bartlett. Cut from a stiff worsted material, the trousers were fluted at the ankles to tuck into the brown standard army boots. The jacket, trimmed in red for the officers, had no buttons, being fastened instead by strips of Velcro. The beret was emblazoned with a white, enamelled UNIT badge and a standard fawn shirt and gold tie completed the outfit. For combat and field duty a utility belt was worn, one pouch of which contained the UNIT "T.M. 45"; a slim, tubular communicator with extendable aerial and seemingly limitless range.

For holiday purposes Wendy Padbury did not appear in episode three. Frazer Hines was absent for most of episode seven and featured only in the final, filmed scene in episode eight.

The scenes of Jamie and the Doctor scaling a lift-shaft at Vaughn's factory were shot on film at Ealing Studios.

The helicopter seen in this story was the BBC's own outside broadcast helicopter, making its first appearance in 'Doctor Who'.

The Cyber-Director prop was supplied by 'Trading Post'. Despite an intricate appearance it was in fact fairly inexpensive to build, upturned plastic cups forming part of its construction. Although never credited on screen, the modulated voice of the Cyber-Director was provided by Peter Halliday. On a different modulator setting Halliday also performed what few ordinary Cybermen voices were needed.

The Cybermen were re-designed again for this story, courtesy of a collaboration between Bobi Bartlett and Bill King. As in 'The Wheel in Space' (Serial "SS") the basic costume was a diver's wet suit. This was sprayed silver, as were the lace-up boots and the five-fingered gloves. Unlike before, however, the exo-skeleton was a very simple affair; thin lines of cabling sewn to the wet suit at hemispherical shoulder, elbow, wrist, hip, knee and ankle junction boxes. 'Trading Post' built the new masks and chest units. The latter were smaller than their predecessors with sequencers controlling flashing lights on the display panels. The masks were built from scratch, the main innovations being a much thinner mouth aperture and head-phone like additions to the 'jug handle' appendages. The tear-drop air holes around the eye sockets were retained.

As in 'The Wheel in Space', the deathray from the Cybermen's chest units was shown using a variation of the 'negative' effect previously associated with the Dalek weaponry. For the filmed battle scene in episode eight, however, 'Trading Post' equipped the Cybermen with sten gun-like props which ignited short duration smoke charges on cue. For safety reasons these props could not be used in the electronic studio.

With the approval of the Ministry of Defence (who felt the story showed the military in a good light), Douglas Camfield was able to 'borrow' the 2nd Battalion of Coldstream Guards for one day's filming at Acton.

Because of the problems of shooting in central London, caption slides supplied by the Visnews Agency were used for pre-invasion establishing shots of London landmarks. Ministry of Technology stock footage was used for all cut-aways to scenes of missiles and rockets launching.

PRODUCTION CREDITS

SERIAL "VV" — EIGHT EPISODES — BLACK AND WHITE

PART 1	-	2nd. November 1968
PART 2	-	9th. November 1968
PART 3	-	16th. November 1968
PART 4	-	23rd. November 1968
PART 5	-	30th. November 1968
PART 6	-	7th. December 1968
PART 7	-	14th. December 1968
PART 8	-	21st. December 1968

CAST

Doctor Who.....Patrick Troughton
Jamie.....Frazer Hines
Zoe.....Wendy Padbury

Lorry driver.....Murray Evans
Patrolman.....Walter Randall
Isobel.....Sally Faulkner
Benton.....John Levene
Tracy.....Geoffrey Cheshire
Tobias Vaughn.....Kevin Stoney
Packer.....Peter Halliday
Gregory.....Ian Fairbairn
Brigadier Lethbridge-Stewart
Nicholas Courtney
Sergeant Walters.....James Thornhill
Captain Turner.....Robert Sidaway
Professor Watkins.....Edward Burnham
Phone Operator/Computer voice
Sheila Dunn
Major-General Rutlidge
Edward Dentith
Workman.....Peter Thompson
Policeman.....Dominic Allan
Private Perkins.....Stacy Davies
Major Branwell.....Clifford Earl
Sergeant Peters.....Norman Hartley
Cyber Director (VO)...Peter Halliday
Cybermen.....Pat Gorman
Ralph Carrigan, Charles Finch
Richard King, John Spradbury
Peter Thornton
UNIT Soldiers.....Charles Finch
Roy Pearce, Ross Huntley
Steve Kelly, Leslie Conrad
James Holbrook, Richard Kitteridge
Gary Dean, Barry Dupres
I.E. Guards.....Leslie Bates
Brian Nolan, Kenneth Hale
Maurice Brooks, Alistair McFarlane
Ron Conrad, Derek Slater
Dave Carter, Terry Duggan
Warehousemen.....Gordon Stothard
Miles Northover, John Lord
Bunker men....Tony Manning, Mike Lee
David Pelton, Derek Slater
UNIT Soldiers/Bunker men
Charles Finch
Clark Reed, Victor Munt
Crawford Lyle, Peter Roy
John Kielty
Non-speaking patrolmen..Peter Pocock
Roy Ford
Stuntmen.....Billy Horrigan
Alan Chuntz, Terry Walsh
Extras.....Robert Pearce
Bobby Beaumont, Reg Cranfield
Derek Chafer, Terence Denville
Trevor Shewring, Simon Stapely
Roy Denton, Lyn Denton
2nd. BATTALION OF COLDSTREAM GUARDS

TECHNICAL CREDITS

Production Assistant
Chris D'Oyly John
Assistant Floor Manager...Sue Willis
Assistant.....Sue Sly
Grams Operators.....Ron Arnett
Dave Silk
Vision Mixers.....David Langford
John Barclay
Floor Assistant.....Michael Ward
Lighting.....Robbie Robinson
Sound.....Alan Edmonds
Bryan Forgham
Technical Managers.....Don Babbage
Peter Valentine
Film Cameraman.....Alan Jonas
Film Editor.....Martyn Day
Film Sound Recordist....Bill Chesnau
Visual Effects.....Bill King
Special Sound.....Brian Hodgson
Costumes.....Bobi Bartlett
Make-up.....Sylvia James
Incidental Music.....Don Harper
Story.....Kit Pedler
Script Editor.....Terrance Dicks
Designer.....Richard Hunt
Producer.....Peter Bryant
Director.....Douglas Camfield